Clinical Section

Methods and Interpretation of Some Simple Clinical Tests*

By

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The object of this paper is to publicize a few tests which give the maximum of useful clinical information with the minimum of apparatus and the minimum expenditure of time or money. The most complicated test to be discussed is the sedimentation rate, and by the method given, it is less trouble than a leucocyte count. The sedimentation rate, occult blood test, haemoglobin and smear are now done routinely on every public medical case in the Winnipeg General Hospital.

Sedimentation Rate

The apparatus needed for a sedimentation rate by the Westergren technique includes a Becton-Dickenson 200 mm. hanging sedimentation tube, a 2 c.c. Luer-Lok hypo syringe, a one ounce rubbertopped bottle of 3.8% solution of sterile Sodium citrate, and an alarm clock.

Method.

0.4 c.c. citrate drawn into boiled syringe, blood to 2 c.c.; shake, carry to office in syringe and suspend in tube until alarm clock rings one hour later. One reading of the height of the column of plasma is then taken. A 1 c.c. or 2 c.c. pipette of 3 mm. internal diameter may be substituted for the hanging tube, if care is taken to be sure it is exactly perpendicular, with its base kept from leaking by resting on a blob of plasticine. It may be supported by another blob of plasticine fastened to the wall. Citrated blood is drawn up to a height of 200 mm. The height of the clear column of plasma may be measured by a millimeter rule.

Interpretation.

Normal in males
Normal in females
Up to 30 mm.
30-50 mm.
Rate slightly increased
Rate moderately increased
Very rapid

Correction for anemia by this method is relatively unimportant.

The rate is normal in functional conditions, cysts, fibroids, peptic ulcer, congestive heart failure and acute catarrhal appendicitis.

The rate is increased in pregnancy, in acute infections such as pelvic cellulitis, pus formation, pneumonia, active tuberculosis, rheumatoid arthritis, rheumatic carditis, and in the presence of infarcts or degenerating tumors, e.g., fungating carcinomata.

The rate is slightly increased in hyperthyroidism, varying between 14 and 45 mm.

The rate is extremely rapid in carcinomatosis and hypernephroma.

Jaundice, cyanosis, congestive heart failure, polycythaemia and pregnancy vitiate the test.

The sedimentation rate is of most value in ruling out functional conditions and in following the clinical course of rheumatic carditis, coronary thrombosis, rheumatoid arthritis, and tuberculosis. It is also of value in choosing a suitable time for operation in cases of pelvic infection. In the case of coronary thrombosis, the rate reaches a maximum after five days and remains elevated until the infarct has been healed in four to eight weeks. It is thus a valuable check on the electrocardiographic evidence.

Occult Blood Test on Stool (Gregersen)

The only equipment needed for the occult blood test is powders in wax paper each containing 25 mgm. benzedine reagent (Merck) and barium peroxide 200 mgm. (retail cost 8c each), and a bottle of 50% glacial acetic acid. One powder is dissolved in 5 c.c. acetic acid and poured over a small smear of feces on paper. A blue colour within three seconds indicates over 5% of blood, a blue colour within 15-45 seconds indicates less than 1% of blood. Gum bleeding, the eating of large amounts of rare meat, or bleeding piles, vitiate the test, which is devised to detect bleeding from innocent or malignant ulcers in the gastrointestinal tract. A specimen may conveniently be obtained by the gloved finger on doing a rectal examination. False positives from internal haemorrhoids may be evaded by getting a specimen on a swab through a proctoscope or by testing the innermost part of a scybalum.

Blood Examination Simplified

In the vast majority of cases a full blood count is not necessary. A Sahli haemoglobin percentage and examination of an unstained blood smear will reveal gross abnormalities and further study can then be undertaken as indicated.

Haemoglobin Per Cent. in Shock

A patient with a previously normal blood count and no haemorrhage, who goes into shock, has a rapid rise in haemoglobin percentage, in severe cases to 140 per cent., owing to increased permeability of the capillary walls. The rise in haemoglobin may occur six hours before the fall in blood pressure and increase in pulse rate are

^{*} An address delivered to the Manitoba Medical Association. September 20th, 1940.

observed. This test will sometimes enable lifesaving measures to be undertaken before it is too late.

Tuberculin Patch Test

It is recognized that patients suffering from tuberculosis almost invariably have a positive tuberculin test unless they are moribund from an overwhelming infection. Moreover, the fact that only 27% of the rural youth of Manitoba have a positive tuberculin test, gives the physician a 70% chance of striking a negative which will obviate the necessity for X-rays in a doubtful case. The difficulty with this test in office practice has been that the 1-1000 intradermal testing solution has to be less than a month old. The tuberculin patch test is as accurate as the intradermal test and is ideal for office practice in that it keeps indefinitely and no syringe or needle is The forearm is simply cleaned with acetone, the crinoline is removed, and the adhesive with its test patches is stuck to the arm for 48 hours. Lederle's sell individual tests for twenty cents.

Sleeping Pulse Rate

A normal adult has a sleeping pulse of 60 or under. This also holds for patients with nervous tachycardia, whereas patients with Graves' disease practically always have a sleeping pulse rate over 76 and often over 90. Afebrile children aged 2 to 12 years have a sleeping pulse averaging 72 and an alert pulse averaging 104. If the sleeping

pulse rate at midnight is 80 or under, there is probably no active carditis, although the sedimentation rate is more accurate.

Evening Temperatures at Home

In cases suspected of tuberculosis or temperature from other cause, a record of the temperature taken by the patient is very useful. The patient rests from 5.30 to 6 p.m., then takes the temperature for two minutes by the clock, and then has the evening meal. Normal women may have a slight temperature elevation in the premenstrual week.

Intestinal Sounds Count*

On auscultation of the normal abdomen there are about 20 sounds per minute. The abdomen is completely silent after perforation of an ulcer, with suppurative peritonitis, acute pancreatitis, abdominal wounds or operations (for 24 to 48 hours), and with large effusions of blood bile or urine. The number of sounds is reduced with serous peritonitis, gonorrheal peritonitis, twisted ovarian cyst and ileus. The count is above normal and includes high-pitched tinkling and bubbling sounds in partial intestinal obstruction. sounds are normal in coronary thrombosis, pneumonia, pyelitis, renal colic and cholecystitis. A rising count in ileus is of good prognostic significance. The value of this test in differentiating coronary thrombosis from an abdominal catastrophe is great.

*Ref. Amer. Jour. Surgery, Aug., 1939, p. 230.

John Abercrombie and His Work*

B

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Introduction

Medicine from time to time has languished under the pall of antiquity, stifled by the dead hand of the departed. At such times men have been engaged in a wistful and regretful looking back, and progress has been retarded by pre-occupation in the glorious past. No such criticism can be made of our time. Indeed, we of the twentieth century are almost completely absorbed by the glamour of today and the glitter of tomorrow. Perhaps we think too rarely of the giants of other days and too commonly regard the elaborate structure of modern medicine as a product of our own efforts.

This modern complacency applies especially to gastro-enterology and is inspired largely by the spectacular progress in recent years. But this recent brilliance is largely an illusion—an illusion created by the phenomenal progress of

*Read before the American Gastro-Enterology Association, June, 1940.

surgery, which has been made possible by anaesthesia and antisepsis. But surgery is the product of centuries of painful plodding in Anatomy, Pathology and Chemistry. It is the exotic flowering of an ancient plant, whose roots ramify deep into the dark past; like a colorful blossom it will fade, giving place to the fruit—the final product of all that has gone before.

In the interest of orientation and in justice to our predecessors it is proper to examine some of the ancient and withered branches of the gastro-enterological tree and make an effort to picture them in their youth and beauty—in the day before they were eclipsed by the flambuoyancy of the blossom.

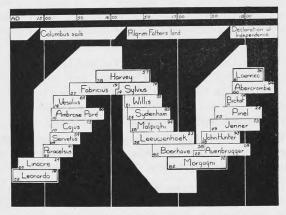
The Position of John Abercrombie in Medical History

For the present study, I have chosen the work of John Abercrombie, M.D., who in 1828 published his great book, "Pathological and Practical Researches on Diseases of the Stomach, The Intestinal

Canal, The Liver and Other Viscera of the Abdomen."

In order to appreciate the life and appraise the work of any individual, it is necessary to understand his chronological position in history. For this reason I show you some synchronological charts, which have been prepared by Dr. Harriet Perry.

Chart 1 was constructed to indicate the growth of medicine up to the beginning of modern practice. Each step indicates the life of an individual who is considered to be representative of his day.



The renaissance — (which in medicine commenced about 1500) — was an intellectual declaration of independence — a declaration which renounced the domination of the ancients. In anatomy, one of the first of the rebels was Leonardo da Vinci; unhappily, his works were unknown in his own day and are only now being appreciated. Vesalius was the great revolutionist; he confounded the dogmatic Galenists and suffered at the hands of orthodoxy, but no doubt the spirit of Galen looked down from Mount Olympus with benign approval; he could not fail to recognize and admire the direct methods and the courage of a man so like himself.

The first period of development, from Leonardo to Harvey—represented in ascending steps—was almost entirely anatomical. It is true that Paracelsus attacked the Hippocratic theories and methods of treatment in a ribald and boisterous manner; but he left no useful substitutes for the things that he destroyed. The other names included are well known to all.

The era of physiology is indicated as having begun with William Harvey about 1600; but anatomy still dominated medicine until abnormal or morbid anatomy superseded it. Morgagni is conceded to be the father of pathology and he is represented on the chart as terminating the purely anatomical period. The interest in morbid anatomy soon led to the recognition of separate disease processes. This gave rise to the 19th century system of medicine which can be said to consist of a study of abnormal physical states and their relation to signs and symptoms. This period is represented as having commenced with Laennec about 1800.

During the 300 years from Leonardo to Laennec, development was largely without therapeutic value; it can be said that the sick man in 1500 was treated as well as in 1800. During this time, surgery certainly did more harm than good. If medical treatment improved at all, it was due to the partial renunciation of savage and heroic methods rather than to the introduction of rational and useful procedures; blood letting, violent purgation and sweating became less popular and emetics began to be used with less abandon.

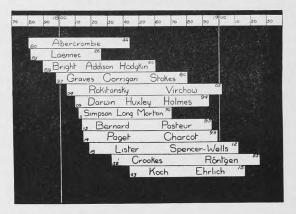


Chart number 2 depicts the growth of medicine after Laennec. There was an immediate production of clinical pathologists whose one aim was to co-relate signs and symptoms with morbid findings. For one hundred years the construction of valid diagnostic equations has been the all absorbing occupation of the profession. If a man could say: "X Symptoms + Y Signs = XY Pathology," his name went down in history. This exercise has given us the names of Laennec, Bright, Hodgkins, Addison, Corrigan, Graves, Stokes, Kussmaul and a hundred others; the latest of these were Osler and Cushing and no doubt history will place them with the great men of all time.

John Abercrombie was of this illustrious group—one of the earliest, having been contemporary with Laennec. He was an Edinburgh physician, who lived from 1780 to 1844. Born in Aberdeen—proverbially the most Scottish of all Scottish cities—he graduated from Edinburgh—always the centre of Scottish culture.



Affectionately yours,

John Abercrombie.

The print is a reproduction of an engraved portrait. It shows him to be a man of noble and intellectual appearance. During his life as a practicing physician in Edinburgh, he became the best known Scottish consultant, indicated by his appointment as Physician in Ordinary to His Majesty in Scotland.

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We shall consider Abercrombie's teachings on diseases of the stomach and duodenum since they are by far the most important part of his work.

Gastro-Enterology in 1828

Before making an effort to assess the value of his teachings, we shall consider the conditions under which he worked; otherwise much of what he says will sound vapid to our sophisticated ears. Perhaps we may best indicate his position as a diagnostician and therapeutist by pointing out the deficiencies in the methods which were available in his day.

- 1. A clinical history was of little value. No single abdominal clinico-pathological entity had been described; all abdominal complaints were regarded as due to "acute gastritis," "inflammation of the bowel," or "liver disease." The abdomen was a "terra incognita" from which only enigmatic signs emerged. The patient's account, therefore, could give no valuable information.
- 2. No special methods of investigation had been introduced. The stomach pump had been used by Dupuytren and others since early in the century but was resorted to only when it was necessary to remove poison; it had never been applied in diagnosis. Haematology did not come into common use till 50 years later. Examination of the stool was not done, and of course, no visualization of abdominal viscera had even been dreamed of.
- 3. Besides these obstacles to the discovery of local disease, there were no well established methods of recognizing remote disease that might cause abdominal symptoms.
- 4. But above all, and perhaps more important than all, there was no conception of the role played by nervous and mental conditions in the production of gastro-intestinal symptoms.

This chaotic state of affairs was realized by Abercrombie himself. He says in speaking of diseases of the stomach: "There are few points in medical science which have undergone more discussion than affections of the stomach: and yet, it must be confessed, that when we come to investigate the subject, according to the rules of pathological induction, we find little that is satisfactory. From these various causes, diseases of the stomach have presented a wide field for speculation, conjecture, and empiricism; a vague and indefinite phraseology has often been allowed to take the place of principles; and the whole subject is removed in some measure out of the usual limits of pathological inquiry."

Some of Abercrombie's Teachings

(a) Pathology.

Let us consider what important ideas Abercrombie advances in his book.

- 1. He exposed the fallacy that "acute gastritis" was a common cause of serious abdominal complaints. He says: "Acute gastritis is a disease described by all systematic writers, but in the records of pathology it is very difficult to find a pure example of it in an idiopathic form. I have been often very much astonished to find, in my own observation, how seldom the stomach shows marks of inflammation, even when the organs most nearly connected with it have been inflamed in the highest degree."
- "Upon the whole view of the subject, the conclusion seems to be, that we are still very much in the dark in regard to idiopathic acute gastritis. For my own part, I have never seen a case which I could consider as being of this nature."

This conception of acute gastritis has stood the test of time. Abercrombie's ideas are quite in line with those of today.

2. Just as he rejected "acute gastritis" as a common condition, he accepted and proved to his own satisfaction that chronic gastritis was common. He says: "We have every reason to believe that the mucous membrane of the stomach is liable to inflammation in a chronic form, which is often advanced so slowly and insidiously, that the dangerous nature of it may be overlooked, until it has passed into ulceration, or has even assumed the characters of organic and hopeless disease. Farther, we shall find, that even ulceration may exist in the stomach without producing any symptoms of an alarming nature, until it gives rise to an attack which is very speedily fatal."

In view of the recent re-introduction of chronic gastritis as a common cause of symptoms, Abercrombie's attitude is most interesting. The development of gastroscopy has vindicated him on this point.

- 3. He had a clear conception of gastric ulceration. He conceived of it as being related to chronic gastritis. He says: "The result which we have occasion to attend to most frequently as the immediate cause of urgent symptoms is ulceration of the inner surface of the stomach; and we shall find that it exists in various forms, the most important of which, in a practical point of view, are the following:—
- "(a) A small defined ulcer of limited extent, with evident loss of substance, and rounded and elevated edges, varying in extent from the size of a split pea to that of a shilling.
- "(b) Ulcers like the former, of small extent, perhaps the size of a shilling, but complicated with thickening and induration of the parietes of the stomach, perhaps to the extent of a crown-piece or more around the ulcer, all the rest of the stomach being perfectly healthy.

"(c) Extensive irregular ulceration of the inner surface of the stomach, generally complicated with thickening and induration of the coats, and fungoid elevations."

In his third group he obviously included cancer. In his autopsy reports also he mistook several malignant growths for simple ulcers. This was inevitable, since cellular pathology was still not known.

- 4. Cases of perforation and haemorrhage are well described.
- 5. He states that similar ulceration takes place in the duodenum. Evidently this was not frequently encountered because he makes very little of it and does not describe an actual case. This fact fits in with the general impression that duodenal ulceration was not common one hundred years ago.

From what has been said it is clear that Abercrombie had a first-class conception of the gross pathology of gastric ulcers. Since he conceived it to be a stage in the course of gastritis, he thought that it could be prevented by the early recognition and treatment of gastritis.

(b) Diagnosis.

Of the diagnosis of ulceration he says: "The disease may be suspected, when there is pain in the stomach occurring with considerable regularity immediately after meals, and continuing for a certain time during the process of digestion, especially if the pain be distinctly referred to a particular spot, and if there be at that spot tenderness on pressure."

He thought the most dependable physical sign was the presence of a tender spot in the epigastrium and insisted that it should be frequently looked for. He appreciated the periodicity of symptoms and the ready response to treatment. He says: "In particular, we should not be deceived, either by the pain having remarkable remissions and the patient enjoying long intervals of perfect health, or by remarkable alleviation of the symptoms taking place under a careful regulation of diet."

He had a surprisingly accurate conception of the meaning of epigastric pain—as indicated by the following passage in which he described three types of stomach and duodenal pain:

- "(a) Pain occurring when the stomach is empty, and rather relieved by taking food. This probably depends upon some degree of acrimony of the fluids of the stomach itself, and is generally relieved by absorbent and alkaline remedies."
- "(b) Pain occurring immediately after taking food, and continuing either during the whole process of digestion, or till the stomach is relieved by vomiting. This is probably connected with chronic inflammation or increased irritability of the mucous membrane of the stomach."

"(c) Pain beginning from two to four hours after a meal, and continuing for some hours. This is probably seated in the duodenum, and connected with inflammatory action or morbid sensibility of its mucous membrane. This form of the affection is often accompanied by pain and tenderness on pressure in the right hypochondrium, and, on that account, is apt to be mistaken for disease of the liver."

From this we see that he appreciated the periodicity of stomach pain, the significance of acidity and the influence of alkalis. Also, he knew that gastric and duodenal inflammation produced different signs and symptoms.

(c) Treatment.

But it is in the realm of treatment that he is to be most admired. Not only did he rise above the therapeutic fads and fancies of the age, but introduced sound, rational measures. He is not quite able to escape from the poly-pharmaceutical tendency of his day and mentions a great variety of drugs, conspicuously alkali mixtures. He was very partial to Ferrous Sulphate (gr. ii. t.i.d.). This is particularly interesting since our most recent fashion in ulcer treatment—the Meulengracht regimen—calls for this drug. From his pathological findings he was of the opinion that healing could occur.

Diet was the main feature in his treatment. He says: "In every form and every stage of the affection, the utmost attention to diet, both as to quality and quantity, is of essential and indispensable importance. The farinaceous articles and milk are those which seem in general to agree best; and some cases have been found to make most satisfactory recoveries under the use of a diet restricted entirely to small quantities of milk or soft fresh-made curd, after they have exhibited for a length of time every character of most formidable or nearly hopeless disease."

Periodically, throughout medical history, crusaders against over-eating appear. Abercrombie was one of these. He says: "In the regulation of diet, much certainly is to be done in dyspeptic cases, by attention to the quality of the articles that are taken; but I am satisfied that much more depends upon the quantity; and I am even disposed to say that the dyspeptic might be almost independent of any attention to the quality of his diet if he rigidly observed the necessary restrictions in regard to quantity."

No doubt this injunction was even more necessary 100 years ago than it is today. Men of the Georgian and Victorian days were great trenchermen and notorious for their capacity. Actual gluttony was prevalent among the well-to-do.

Enough has been said to indicate that Abercrombie had an accurate conception of the pathology and course of peptic ulcer and that his treatment left little to be desired. Hundreds of men have since his time devised special diets, but



every one is a variation on the original theme, i.e., bland food in small quantities plus alkaline mixtures. One feels that patients with ulcers received just as good treatment from Abercrombie as they do in this day.

Priority of Abercrombie's Work

The question of priority in medical discoveries has often produced bitter disputes and not infrequently quite undignified vituperation. It is not suggested that Abercrombie was the first to describe peptic ulcers; he makes no such claim and frequently quotes contemporary and earlier descriptions. Indeed, his generosity in mentioning others and his complete freedom from bombast and self-glorification is refreshing and rather unusual in medical literature of his day. His contemporaries usually mentioned other authors only to confound and damn them.

I am not sure when and by whom peptic ulcer was first described but there is a very good account of the gross appearance in Matthew Baillie's "Morbid Anatomy", published in 1793 when Aber-erombie was only 13 years old. It was the recognized textbook on Pathology for many years and no doubt Abercrombie poured over it as a student. Furthermore, Abercrombie does not claim priority for his conception of duodenal inflammation. He refers to a specimen of perforated duodenal ulcer in the museum of the Royal College of Surgeons of Edinburgh and also says: "The peculiar character of the disease of the duodenum are well illustrated by a case related by Dr. Irvine, in the Medical Journal of Philadelphia for August, 1824." This suggests that the original description of duodenal ulcer may belong to the United States.

The chief claims that we can make for Abercrombie are that he had an exact knowledge of the pathology and progress of peptic ulceration; he understood the symptoms that might be produced; he appreciated the clinical course and possible termination; he prescribed medication and diet that has been little improved upon in the past hundred years. His was the first publication in the English language on the subject and many of his observations were original. His was indeed a magnificent accomplishment and the name of John Abercrombie is worthy of our respect and should be perpetuated in the annals of gastro-enterology.

In far too many homes, a breakfast of a roll and a cup of coffee is the fare for children as well as adults. Woefully deficient in vitamins and minerals, such a meal furnishes little more than a small amount of calories. A dish of Pablum and milk, however, is just as easily prepared as a "continental breakfast," but furnishes a variety of minerals (calcium, phosphorus, iron, and copper) and vitamins (B₁ and G) not found so abundantly in any other cereal or breadstuff. The addition of a glass of orange juice and one Mead's Capsule of Oleum Percomorphum can easily build up this simple breakfast into a nourishing meal for the children of the family as well as the adult members. It is within the physician's province to inquire into and advise upon such nutritional problems, especially since Mead Products are never advertised to the public.—Adv.

Editorials and Association Notes

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Annual Meeting Canadian Medical Association Winnipeg, June 23-27, 1941

Only paid-up members of both the local provincial and the Canadian Medical Associations (total cost in Manitoba \$18.00 annually) will be eligible to attend the Annual Meeting of the Canadian Medical Association to be held at the Royal Alexandra Hotel in Winnipeg in June, 1941. This rule is being strictly enforced by the C.M.A.

Twenty - four local committees on programme and arrangements are hard at work.

The local advisory committee is comprised of:-

Dr. G. S. Fahrni, President-Elect of the Canadian Medical Association; Dr. A. W. S. Hay, Honorary Secretary; Dr. E. L. Ross, Dr. H. D. Kitchen, Dr. Digby Wheeler, Dr. J. S. McInnes, Dr. A. T. Mathers, Dr. O. C. Trainor, Dr. J. D. Adamson, Dr. A. F. Menzies, Dr. H. O. McDiarmid and Dr. R. E. Dicks.

The speakers will come from various parts of Canada and the United States. A certain percentage of the programme will be given by Manitoba doctors.

It is hoped that local pride as well as scientific curiosity will bring a large attendance from the profession in Manitoba.

Health Survey of Rural Manitoba Youth

The Manitoba Department of Health and Public Welfare has recently issued a brochure giving the results of a health survey undertaken by Doctors Cecil Sheps, Elizabeth McKim, Maxwell Bowman and Marguerite Swan. 3,146 persons between 13 and 30 were examined throughout the province in Community Youth Centers, Home Making Schools and Agricultural Schools. In addition to a history and physical examination, Wassermann and tuberculin tests were done.

The most interesting results were as follows:

- * 8% had had appendectomy and 29% ton-sillectomy.
 - 72% had vaccination marks and 49% had had diphtheria toxoid.
 - 18% wore glasses. 29% without glasses had defective vision and
 - 37% with glasses had defective vision. 2% had defective hearing.
 - 27% had a positive tuberculin test. About half of the positive reactors have now been X-rayed and 15 cases whose plates were not clear are being kept under observation.
 - 4 positive Wassermann tests were found in over 3,000 tests. It is suggested that persons who were aware that they had syphilis did not undergo the health examination.
 - Approximately 70% had one or more remediable defects or conditions about which they required advice. They were informed of the defects and advised to consult their physicians, dentists or oculists.

The cost of the survey was \$1.87 per capita. including all the X-rays. In addition to the statistical value of the survey the practical preventive medical aspect more than justifies the expense.

But possibly the most useful feature of the undertaking was the health education campaign which was carried on simultaneously. All the young people had first hand experience of the value of a medical examination, and most of them took lecture courses on health. For example, the girls at the Youth Training Schools took a twenty hour course from public health nurses on hygiene, pre and post natal care, preventible diseases of childhood, communicable disease, milk, water and sewage. A slightly modified course was given to boys at the Agricultural Schools. Additional lectures were sometimes given by the doctors conducting the survey.

The Department of Health and Public Welfare is to be congratulated on a splendid piece of work.

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Some Highlights on the Work of the M.M.A. in 1940

Exclusive of the Annual Convention

The Divisional Advisory Committee of the Manitoba Medical Association has worked with the National Medical Co-operation Committee on medical matters pertaining to M.D. 10 and the Department of National Defence.

The Committee on Economics, after six months' toil, completed an agreement with the Firefighter's Club, whereby the men of the Winnipeg Fire Department and their families receive medical attention on an insurance basis at a moderate cost.

Through the Extra Mural Committee thirteen speakers attended district meetings throughout the province. The Association paid their travelling expenses.

The Cancer Committee report that the Cancer Relief and Research Institute of Manitoba is doing good work. An educational programme has been carried out in rural Manitoba and an intensive survey has been made in one municipality.

At present committees are studying the questions of a schedule of medical fees for Manitoba, and the position of the Municipal Health Officers.

Post - Graduate Course March 5th, 6th, 7th

The Faculty of Medicine of the University of Manitoba will offer a three-day post-graduate course on March 5th, 6th and 7th. This course will include Pathology, Public Health, Surgery and Medicine.

Dr. McCartney of the University of Minnesota will be the visiting speaker and will take part in several discussions on the programme, as well as delivering a paper to the Winnipeg Medical Society on Thursday evening, March 6th.

The Winnipeg Medical Society has invited Dr. Hendrick Dam, discoverer of Vitamin K, to deliver the Gordon Bell Memorial Lecture on the evening of March 5th in Theatre A, University, Broadway. Dr. Dam's home is in Copenhagen and he is at present travelling in the Northern States. As yet no definite acceptance has been received from him. Further notice regarding this lecture will appear in next month's *Review*.

The fee for this course is \$10.00 and the committee in charge would appreciate receiving advance notice from all those who intend to register. Address communications to Dr. L. G. Bell, Secretary of the Post-Graduate Committee, % The Dean's Office, Medical College, Winnipeg.

Post-Graduate Course Programme

Winnipeg . . Wednesday, Thursday, Friday, March 5th, 6th, 7th, 1941

Fee for this Course is \$10.00

WEDNESDAY, MARCH 5th

SURGERY

Morning:

9.00-10.30 Outpatient Clinic. (8 ten-minute Clinics).

Dr. O. S. Waugh — Prolapsed Intervertebral Disc.

Dr. P. H. T. Thorlakson — Total Gastrectomy.

Dr. M. R. MacCharles — Sarcoma of Thigh.

Dr. Gordon Fahrni—To be announced. Dr. A. C. Abbott — To be announced.

Dr. M. B. Perrin — Pneumonectomy. Dr. A. W. S. Hay — To be announced.

Dr. W. A. McElmoyle — Angina Pectoris.

10.30-11.00 Round Table Discussion.
Subject — Traumatic Wounds.
Chairman — Dr. W. A. Gardner.

11.00-11.30 Forlong Memorial Institute. X-Ray Therapy.

Afternoon:

2.00- 3.00 Ward Rounds on the Fracture Service.
Dr. Alexander Gibson.

3.00- 4.00 Operative Clinics.

Dr. O. S. Waugh.

Dr. Alexander Gibson.

Dr. M. R. MacCharles.

Dr. Gordon Fahrni.

Dr. C. W. Burns.

THURSDAY, MARCH, 6th

Ратногосу

Winnipeg General Hospital, W3 Balcony

The visiting speaker will be Dr. J. S. McCartney,
Associate Professor of Pathology,
University of Minnesota.

Morning:

9.00-10.00 Tumour Clinic, at which the Surgical Staff will present four or five patients with tumours. Biopsy would be obtained where feasible. Professor McCartney will lead the discussion.

10.00-10.15 Demonstration and comments on removal of biopsy — Dr. M. R. Mac-Charles.

10.15-10.30 Lantern Slide demonstration of some biopsies received by the Cancer Institute with comments by Dr. J. M. Lederman.

10.30-10.45 Coffee.

Pathology Lecture Room, Medical College

10.50-11.20 Bronchogenic Carcinoma. Prominent Clinical and autopsy features of sixtyfive cases. Capt. Alan A. Klass, R.C., A.M.C.

11.20-11.30 Discussion by Prof. J. S. McCartney.

11.30-11.40 Summary and comments on clinical features by Dr. J. D. Adamson.

11.40-12.15 Presentation on Ovarian Tumors by Professor J. S. McCartney.

Winnipeg General Hospital

12.30- 2.00 Clinical Luncheon, Winnipeg General Hospital.

Afternoon:

PUBLIC HEALTH

2.00- The relationship of the General Practitioner to Public Health Matters.

Points of possible conflict with Public Health Departments by Dr. M. S. Lougheed.

School Medical Inspection of Children.

Minimum requirements. Stressing system and pre-school examination by Dr. C. R. Donovan.

New and Improved Methods of Immunization.

Best time to do each, and proper methods by Dr. M. Bowman.

The Place of the General Practitioner in the War Effort.

Examination and classification of N.P.A.M. recruits. Immunization of them. Freedom from communicable disease, and contact with it, by Major M. R. Elliott.

Evening:

8.30- 9.30 Pulmonary Embolism and Thrombosis by Professor J. S. McCartney.

Under the auspices of the Winnipeg Medical Society.

(Continued on Page 32),

FRIDAY, MARCH 7th

MEDICINE

Winnipeg General Hospital, W3 Balcony

Morning:

9.00-10.00 Peripheral Vascular Disease:

Dr. J. M. McEachern. Prof. J. S. McCartney. Dr. J. D. Adamson.

10.00-11.00 Clinical Pathological Conference. Fatal hemorrhage from Benign Gastric Ulcer in man aged 62.

> Dr. H. D. Kitchen—Medicine. Dr. P. H. T. Thorlakson-Surgery. Prof. J. S. McCartney-Pathology. Dr. J. D. Adamson-Summary.

11.00-12.00 Medical Cases from wards of Winnipeg General Hospital at that time.

12.15- 1.15 Luncheon at St. Boniface Hospital.

Afternoon:

St. Boniface Hospital

1.15- 2.00 Vitamins in General Practice—Dr. A. Hollenberg.

2.00- 2.30 Public Health Aspects of Venereal Disease by Dr. F. W. Jackson, Deputy Minister of Public Health and Welfare. 2.30-

Demonstration in Venereal Disease Clinic.

Evening:

Dinner to Manitoba Health Officers by Department of Health and Public Welfare.

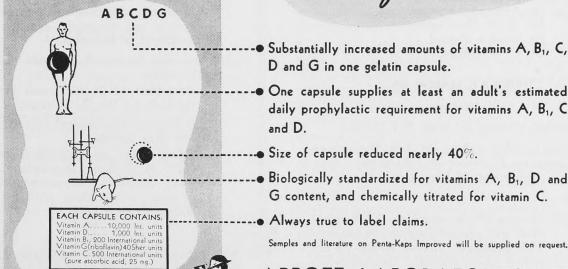
Time and place to be announced at the meeting.

American College of Surgeons to Hold Sectional Meeting in Minneapolis

March 10th, 11th and 12th have been set as the dates for a Sectional Meeting of the American College of Surgeons in which the states of Minnesota, North and South Dakota, Iowa, Nebraska, Montana, Kansas and Wisconsin, and the province of Manitoba will participate. Headquarters will be at the Nicollet Hotel, in Minneapolis.

Distinguished surgeons from all parts of the country will address the scientific sessions and lead the conferences and panel discussions. Among them will be the president of the College, Dr. Evarts A. Graham. Further information may be obtained from Dr. J. A. Gunn, 203 Medical Arts Bldg., Winnipeg.





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Department of Health and Public Welfare

Health and The National Effort

Only a people physically fit can consider themselves prepared. Physical fitness means more than just the ability to attend to one's daily work. It means the ability to undergo the rigors of speed in industry, the stress of life under military conditions. During World War I, great numbers of recruits were found to be incapacitated for service because of easily correctable defects.

Part of the great campaign for preparedness involves the employment of additional men, particularly in ship yards and in the great industries which manufacture motors, munitions and supplies. Preparedness demands not only that the recruits for the army be kept physically fit, but particularly, that the industries which make possible a successful campaign be manned by men who will not fall by the wayside because of physical or mental breakdowns. In well-organized industries today, medical departments determine the physical state of workers and do everything possible to keep every man fit for work day after day. The worker who wishes to aid in the campaign for preparedness will, of course, co-operate in these efforts and will realize his obligation to the nation, to the industry and to himself.

As new plants are erected in what are now open fields, as great numbers of workmen create correspondingly new communities, and as the tempo of production is stepped up, there must be an attendant creation of an adequate and safe environment. Defence in its broadest sense means security, against foreign aggression, internal revolution, unemployment, need, hunger, and communicable disease. The whole defence program means more than airplanes and armament—it includes man power whose development has been so guided that they can meet and survive the pressures brought upon them whether in war or peace.

We all agree that man power, with all the term implies, is the most important single factor in the industrial world. Therefore, everything possible should be done to insure the highest possible efficiency of that personnel. Its health and well being determines in large measure its effectiveness on the job. The development of a well integrated, contented working group is as essential as the planning of the type of product to be made and the selection of materials to go into it.

Since men are so vital in the scheme of things, proper attention to their health is of primary importance. The physician trained in industrial medicine can be of great help in selecting and maintaining healthy personnel. We all know that a worker is not at his best on the job with even a slight ailment. A toothache, sore throat, upset stomach, any ache or pain, may so impair his productivity that he is more of a liability than an asset. Accidents often happen as a result of such slight ailments. Early attention to these seemingly inconsequential symptoms makes for safety, good health and better workers.

There are great opportunities for preventive medicine in industry.

Pre-Employment Examinations

Such an examination can be made a valuable instrument and a preventive, for not only the employer but the employee and community as well. Emphasis needs to be put on the benefit to the worker. This has been too often overlooked. Unfortunately there are a great many who still believe that a pre-employment physical examination is merely to reject a man for employment.

They do not stop to find out that it can be not only of the greatest benefit, but insurance for the future to both employer and employee. Advice should always be given so far as possible as to what course to follow to correct any defect found. The rejected individual can sometimes have a condition corrected and later be passed for employment.

Pre-employment examinations have many advantages for the prospective employee. They tell him and his employer where it is safest to work. In a pre-employment examination we can do an inestimable amount of good by detecting disease in its incipiency, giving advice as to ways of correcting unfavorable conditions and avoiding others, thus making a friendship between the plant health service and the employee.

Periodic Examinations

Following this first physical examination there are many other occasions during employment when a worker should be examined. If possible, there should be periodic health examinations performed regularly. Irrespective of how often they are done, an occasional check - up to discover bodily conditions which are inimical to safety, good production, and good health, is a wise precaution. Such examinations help to prevent illness, and according to life insurance statistics, prolong life. They are especially worthwhile in the older age groups where so often a worker slows down and does poor work because of unsuspected changes in his physical condition. Perhaps the greatest good comes from periodic examinations, made on employees exposed to hazardous working conditions. Surely there is no better check of a dusty job than a regular physical examination to determine whether the individual is being harmed. Also such examinations prevent many unjustified claims as to injury. There is likewise some evidence to show that periodic examinations which uncover physical defects are the means of preventing accidents. So altogether they are a "safety-first' preventive measure.

Reduction of Sickness and Accidents

All of these endeavors to discover disease and abnormalities which lead to disease will inevitably and eventually reduce lost time due to sickness. This is an advantage to all—the employee, employer and the community. It is of public health value as well as of individual benefit. Industrial medical service is a necessary form of health enterprise, and will become in some respects quite as important to public health programs as anything they now do.

Accidents

We all know the records that have been attained in reducing accident rates—both as to frequency and severity. A great deal of time and money has been spent in doing this, but no one would say it has not been profitable. Despite the splendid records made in eliminating the number of accidents, there is still a great deal to be done in restoring those injured to useful and remunerative work, with a minimum of mental upset.

Sickness

In view of the fact that there is 10 to 15 times as much lost time from sickness as from accidents, shouldn't there be more well-organized attempts to prevent the amount of illness? Some of the most striking and best appreciated accomplishments of medical service in industry have been made in reducing the amount of illness amongst the employees.

Practical Procedure for Avoiding Occupational Disease

With few exceptions, any actual case of occupational disease which develops at this time is an admission of failure to utilize the methods of prevention now available. The first item in this practical procedure for avoiding development of occupational disease is to know your materials. The second item is to obtain information on the toxic properties and possibilities of injury to health presented by these materials. The third item is that the necessary data be obtained on the extent of exposures to these potentially injurious materials as they actually exist in the plant. The actual control of excessive exposures is the fourth item in assuring prevention of occupational disease. Exposures can be reduced not only by changes in mechanical equipment and in process but that even a mere change in the procedure by which a job is carried on will measurably affect the man's exposure. Finally, it is desirable to check the effectiveness of control measures both after their installation and from time to time as conditions warrant. Check not only the conditions, but also the men themselves. Thus the exposure of men to lead can be evaluated by periodic analysis of the urine for lead and that to benzol by ratio of inorganic to total sulphate content of urine.

Economic production can be furthered by the utilization of the most economic and the most productive methods without taking an unnecessary toll in human health and life.

Raising General Health Levels

It is a high health level that is to be sought as our immediate and as our long range goal. Anything short of this is an admission of partial failure. Today we have a more fundamental purpose in healthful conditions and good health practices: that of furthering economic production.

Advice and information relating to accident prevention in industry is obtainable through the Department of Labor, Province of Manitoba. Occupational disease and industrial health problems can be referred to the Department of Health and Public Welfare.

C. R. DONOVAN, M.D., D.P.H., Director, Division of Disease Prevention.

COMMUNICABLE DISEASE REPORT November 5th to December 30th, 1940.

Measles: Total 1,013—Winnipeg 95, Daly 66, Brandon 65, Hanover 51, Louise 41, Sifton 40, Gilbert Plains Village 31, North Norfolk 30, Virden 27, Whitehead 27, Gilbert Plains Rural 27, Portage Rural 26, Pilot Mound 24, Pembina 23, Woodworth 22, St. Paul East 22, Ethelbert 20, Blanshard 19, Coldwell 19, Glenwood 17, Tuxedo 14, Saskatchewan 14, Albert 11, Westbourne 11, Roblin Rural 11, Kildonan East 11, Unorganized 11, Rosser 10, Neepawa 9, Dauphin Town 8, Riverside 7, Cameron 7, St. Boniface 7, Ste. Rose Rural 6, Wallace 5, Eriksdale 5, Tache 5, Albert 5, Brenda 4, Manitou Village 4, Elton 4, Souris 4, Fort Garry 3, McCreary 3, Portage City 3, Assiniboia 3, Hamiota Rural 3, Birtle Rural 2, Hartney 2, Lorne 2, Argyle 2, Morris Town 2, St. James 2, Flin Flon 1, Grev 1, Langford 1, South Norfolk 1, Rosedale 1, St. Vital 1, Strathclair 1, Victoria 1, Westbourne 1. Beausejour 1, Edward 1, Hamiota Village 1, Kildonan West 1, Lawrence 1, Napinka 1. Turtle Mountain 1 (Late Reported: Gilbert Plains Village 20, Whitehead 18, Gilbert Plains Rural 16, Hanover 15, Daly 8. Tuxedo 4, Ste. Rose Rural 4, Wallace 3, Brandon 3, Louise 3, Virden 2, Riverside 2, Ste. Rose Village 1, Birtle Town 1, Dauphin Rural 1, Portage City 1, Woodworth 1).

- Chickenpox: Total 567—Winnipeg 270, Stonewall 27, St. James 23, Sifton 13, Transcona 12, Flin Flon 11, Portage City 10, Lawrence 8, Woodworth 7, Kildonan East 6, Rockwood 6, St. Boniface 5, Minnedosa 4, Morris Rural 3, Brandon 3, Dauphin Rural 3, Swan River 3, Edward 2, Rapid City 2, Argyle 1, Boissevain 1, Charleswood 1, Franklin 1, Kildonan North 1, La Broquerie 1, Portage Rural 1, St. Boniface 1, Selkirk 1, Woodlea 1, Brokenhead 1, Melita 1, Springfield 1, The Pas 1, Whitehead 1 (Late Reported: Flin Flon 15, St. Francois Xavier 12, Sifton 3, Cartier 1, Macdonald 1, Ellice 1, Gilbert Plains Rural 1).
- Mumps: Total 218—Winnipeg 103, St. Boniface 97, Strathclair 3, Portage Rural 1, North Norfolk 1, La Broquerie 1, Brandon 1, Deloraine 1, Fort Garry 1, Kildonan North 1, Lac du Bonnet 1, St. James 1, Springfield 1, Transcona 1 (Late Reported: Minto 1, Deloraine 1, North Norfolk 1, Pembina 1).
- Whooping Cough: Total 181—Winnipeg 77, St. Boniface 8, Montcalm 8, Kildonan West 7, Portage City 5, Pembina 5, Woodlands 5, St. Vital 4, Louise 4, Roblin Rural 3, Morris Rural 3, Brenda 3, Minnedosa 3, Daly 3, Kildonan East 3, Dauphin Town 2, Stonewall 2, Portage Rural 2, Lawrence 1, St. James 1, Unorganized 1, Brokenhead 1, Neepawa 1, Ste. Anne 1 (Late Reported: Pembina 9, Unorganized 6, Brenda 5, Minnedosa 2, Ste. Anne 1, Louise 1, St. James 1, Woodlands 1, Hanover 1, St. Francois Xavier 1).
- Influenza: Total 156—Brandon 123, Portage City 10,
 Hamiota Village 7, Portage Rural 5, Carberry 3,
 Cypress South 1, St. James 1 (Late Reported: Brenda 1, Hamiota Rural 2, Ste. Rose Rural 1, Minto 1,
 Unorganized 1).
- German Measles: Total 122—Brandon 41, Ste. Rose Rural 32, Arthur 19, Tuxedo 11, Ste. Rose Village 6, Lawrence 4, The Pas 2, McCreary 1, Napinka 1, Unorganized 1, Melita 1, Ochre River 1 (Late Reported: Unorganized 1, Tuxedo 1).
- Scarlet Fever: Total 90—Winnipeg 37, Portage City 9, Whitemouth 8, Victoria 5, North Norfolk 5, Brandon 3, Ethelbert 3, Unorganized 3, Binscarth 3, Kildonan East 2, Shell River 2, Roblin Rural 2, Springfield 2, McCreary 1, Russell Rural 1, Swan River Town 1, Louise 1, St. James 1, Ste. Rose Village 1.
- Tuberculosis: Total 73—Winnipeg 19, Unorganized 14, The Pas 8, Brandon 5, Dauphin Town 3, Cypress North 2, Eriksdale 2, Franklin 2, St. Boniface 2, Mossey River 2, St. James 2, Brokenhead 1, Brooklands 1, Daly 1, Dauphin Rural 1, Elton 1, Lakeview 1, Minitonas 1, Neepawa 1, Portage City 1, Portage Rural 1, Rhineland 1, St. Vital 1, Strathcona 1, Swan River Town 1, Tache 1, Morris Rural 1.
- Diphtheria: Total 38—Winnipeg 28, St. Boniface 4, Unorganized 2, Tuxedo 1, Tache 1, Coldwell 1 (Late Reported: Unorganized 1).
- Pneumonia Lobar: Total 31—Brandon 6, Ste. Rose Rural 4, Unorganized 3, Lawrence 1, Portage City 1, Riverside 1, Tuxedo 1, Whitehead 1, St. James 1, St. Laurent 1, Wallace 1 (Late Reported: Unorganized 2, Neepawa 2, Grey 1, Argyle 1, Minitonas 1, St. Anne 1, La Broquerie 1, Ste. Rose Rural 1).
- Erysipelas: Total 9—Springfield 2, Winnipeg 2, St. Vital 1, Transcona 1, Brandon 1, Portage Rural 1 (Late Reported: Brooklands 1).
- Diphtheria Carriers: Total 9-Winnipeg 9.
- Meningococcal Meningitis: Total 6—Brandon 3, Winnipeg 2, Fort Garry 1.

Typhoid Fever: Total 3-Winnipeg 1 (Late Reported: Winnipeg 1, Riverside 1).

Encephalitis: Total 2-Cypress South 1 (Late Reported: St. Vital 1).

Septic Sore Throat: Total 2-Portage Rural 2.

Anterior Poliomyelitis: Total 2-(Late Reported: Fort Garry 1, Brandon 1).

Opthalmia Neonatorium: Total 1-Brandon 1.

Undulant Fever: Total 1-Charleswood 1.

Para-Typhoid Fever: Total 1-Brandon 1.

Treaty Indians: Total 14—Influenza 6, Tuberculosis 3, Pneumonia Lobar 2, Anterior Poliomyelitis 1, Diphtheria 1, Whooping Cough 1.

Venereal Disease: Total 125—Gonorrhoea 78, Syphilis 47.

DEATHS FROM COMMUNICABLE DISEASE November, 1940.

URBAN-Cancer 42, Pneumonia Lobar 6, Pneumonia (other forms) 5, Tuberculosis 3, Whooping Cough 2, Diphtheria 1, Influenza 1, Poliomyelitis 1, Syphilis 1, Typhoid Fever 1, Cerebrospinal Meningitis 1, Tetanus 1, Dysentry 1, other deaths under one year 12, other deaths over one year 208, Stillbirths 15. Total 301.

RURAL—Cancer 24, Tuberculosis 15, Pneumonia Lobar 8, Pneumonia (other forms) 7, Whooping Cough 4, Influenza 3, Erysipelas 1, Lethargic Encephalitis 1, Measles 1, Scarlet Fever 1, Syphilis 1 other deaths under one year 16, other deaths over one year 172, Stillbirths 25. Total 280.

INDIANS—Tuberculosis 4, Pneumonia Lobar 1, Pneumonia (other forms) 1, other deaths under one year 6, other deaths over one year 9, Stillbirths 2. Total 23.

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—Round Table Discussion, Ninth Annual Meeting, American Academy of Pediatrics; J. Pediat., p. 130. Jan. 1940.

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Personal Notes and Social News

Conducted by Gerda Fremming, M.D.

Dr. Walter Alexander is at present doing postgraduate work in the ear, nose and throat department of the New York Polyclinic hospital.

Dr. and Mrs. Harold Morrison, of Dryden, Ont., were recent visitors to Winnipeg.

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Dr. Marguerite Swan has returned from a tour of New York and the Southern States where she was studying public health measures.

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Dr. H. M. Speechly, Coroner for Winnipeg, was re-elected chairman of the Winnipeg advisory traffic commission.

Dr. Harold Brookler was married to Miss Gertrude Mandell on New Years Day, at Estevan, Sask.

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The University of Minnesota, at St. Paul, Minn., held a post-graduate week in Ophthalmology January 20th to the 25th. The following doctors from the Medical Arts building attended: Drs. K. J. Austmann, R. Black, W. E. Campbell, J. T. Cruise, G. W. Fletcher, F. D. McKenty, F. A. Macneil, E. J. Washington, C. M. Clare.

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Dr. J. A. MacDougall, '34, has been made surgical specialist for the British Army Medical Corps at Millbank, England, with the rank of Major.

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Dr. W. B. VanVliet, '23, who has been practicing in England for several years, has joined the R.C.A.M.C. and is stationed in England.

2 0 0

Dr. B. P. Duncan, of Bissett, Man., has enlisted with the C.A.S.F.

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Dr. and Mrs. David Braunstein, of Rossburn, Man., are receiving congratulations on the birth of a son, born January 16th, at the Winnipeg General Hospital.

0 0 0

Dr. F. R. Tucker, of Winnipeg, has joined the R.C.A.M.C. and at present is located at Port Arthur, Ont.

Dr. and Mrs. I. M. Shankman, of Winnipeg, have announced the arrival of a son on January 19th, at the St. Boniface Hospital.

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Dr. W. M. Musgrove has been appointed to the 3rd Casualty Clearing Station, Port Arthur, Ont. Drs. E. L. Ross, of Ninette, Man.; Geo. Clingan, of Virden, Man.; S. Bardal, of Shoal Lake, Man., and Herbert Meltzer, of Ninette, Man., attended a full meeting of the executive of the Manitoba Medical Association held in Winnipeg January 16th.

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Dr. J. C. Elais, of Winkler, Man., is attached to the R.C.A.F. in Montreal, Que.

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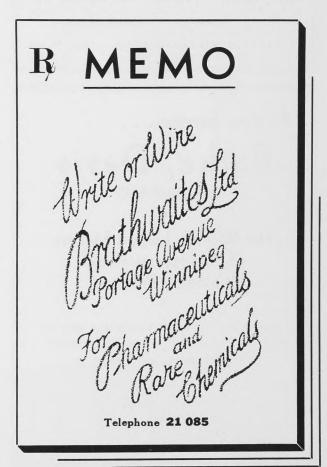
Dr. Edward I. Ostry, of Whitemouth, and Dr. R. P. Brown, of Gladstone, have been appointed coroners for their respective districts.

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Dr. Geo. Kenneard, M.A. (Man. '22), senior medical officer of the Colonial Medical Service in the Falkland Islands, was honored with a civil O.B.E. by His Majesty in the late New Year's honor list.

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Reasonable thought and observation are the chief roots of medicine; observation, however, is the thread by which the conclusions of the physician must be guided.—Georgio Baglivi.



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